

7. SOME NOTES ON AGE OF SEXUAL MATURITY OF SEVEN SPECIES OF INDIAN WILD MAMMALS IN CAPTIVITY

Perusal of the available literature revealed that there are not many reports on the age of sexual maturity of different Indian Wild mammals. In this note an attempt is made to present some notes on the age of sexual maturity of seven species of Indian Wild mammals observed at Nandankanan Biological Park, Orissa.

OBSERVATIONS AND DISCUSSION

TIGER (*Panthera tigris*)

A tigress born in the Park on 14-12-1972

was kept along with a tiger born here on 22-6-1973 from 15-7-1974.

Mating of this pair of tigers was observed for the first time from 6-12-1975 to 7-12-1975 and subsequently during the following periods: 4-1-1976 to 6-1-1976, 1-2-1976 to 4-2-1976, 24-3-1976 to 26-3-1976, 7-5-1976 to 10-5-1976, 26-6-1976 to 30-6-1976, 29-8-1976 to 4-9-1976 and 9-1-1977 to 14-1-1977 resulting in the birth of three cubs on 22-4-1977.

These observations suggest that while the tigress came to her first oestrus at the age of

TABLE

Sl. No.	Date of birth (Name of the specimen)	Dates of first mating observed (Age at which first oestrus observed)	Date of successful mating with conception	Date of first parturition	Age of sexual maturity (Age at which littered for the first time)
1	2	3	4	5	6
1.	20-1-1973 (LATA)	6-3-1975 (2 years, 1 month and 15 days)	29-3-1975 to 1-4-1975	7-7-1975	2 years, 2 months and 10 days or say 2 years and 2 months (2 years, 5 months and 18 days)
2.	23-7-1973 (SHANTI)	17-10-1975 to 22-10-1975 (2 years, 2 months and 25 days)	29-1-1977 to 2-2-1977	8-5-1977	3 years, 6 months and 7 days or say 3 years and 6 months (3 years, 9 months and 16 days)
3.	2-8-1973 (BASANTI)	26-1-1976 to 29-1-1976 (2 years, 5 months and 25 days)	5-12-1977 to 9-12-1977	14-3-1978	4 years, 4 months and 4 days or say 4 years and 4 months (4 years, 7 months and 13 days)
4.	23-2-1975 (TORU)	Not recorded	Not recorded	11-2-1978	(2 years, 11 months and 20 days)

2 years 11 months and 23 days or say about 3 years, the male reached his sexual maturity at the age of 3 years 6 months and 19 days or say about 3 years and 7 months.

According to Acharjyo and Misra (1975) the first signs of sexual maturity in a tigress appeared at the age of about 3 years but a tiger did not reach his sexual maturity at least one week before he reached the age of 4 years. Chaturvedi (1970) states that the first cubbing of a tigress takes place at about the age of four and a tiger is full grown in about 5 years. A tigress became sexually mature soon after passing the age of 3½ years whereas a tiger became sexually mature at least 15 days before he reached the age of 4 years (Crandall 1965). Prater (1971) states that lions and tigers take from three to five years to become fully adult but males and females are capable of breeding soon after, or even before, they are three years old. Little has been published regarding the age at which tigers reach sexual maturity (Schaller 1972). At the Whipsnade Zoo a female is said to have produced a litter at the age of 2 years (Pocock 1939). Abramov (1962) and Novikov (1962) have given the age of sexual maturity in this species as 4 years. Sankhala (1967) states that the tiger cubs mature at an age between 3½ and 6 years.

LEOPARD OR PANTHER (*Panthera pardus*)

The details of age of sexual maturity observed in four female leopards are given in the Table. They were living with sexually matured males from the age of six to twelve months.

A study of this table reveals that while the first signs of oestrus appeared at the age of about 2 years and 2 months to about 2 years and 6 months, they littered for the first time at the age of about 2 years and 6 months to

about 4 years and 7 months. They were capable of reproducing at the age of about 2 years and 2 months to about 4 years and 4 months.

Five female leopards of the Delhi Zoological Park came into oestrus for the first time at the age of 1 year and 8 months to 3 years and 10 months (Desai 1975). He further states that six female leopards littered for the first time at the age of 2 years and 3 months to 4 years and 2 months. Prater (loc. cit.) states that leopards are generally full grown in one and half to three years.

GOLDEN CAT (*Felis temminckii*)

One female golden cat born in the Park on 2-3-1972 littered for the first time in her life on 9-4-1974 at the age of 2 years, 1 month and 8 days or say about 2 years and 1 month. This was living with an adult male throughout this period.

The smaller cats are almost adult when a year old (Prater loc. cit.). Females of most species of *Felis* attain puberty at the age of 12 to 15 months (Walker *et al.* 1964).

JUNGLE CAT (*Felis chaus*)

A male Jungle cat born in the Park on 7-11-1975 was kept along with a full grown adult female of the same species from the age of about six months. The female gave birth to a litter of five kittens on 10-11-1977 when the male was 2 years and 4 days old. Taking the gestation period as above 2 months (Asdell 1964) the age of sexual maturity of the male can be said as 1 year, 10 months and 4 days or say 1 year and 10 months.

The smaller cats are almost adult when a year old (Prater, loc. cit.). Females of most species of *Felis* attain puberty at the age of 12 to 15 months (Walker *et al.*, loc. cit.)

COMMON PALM CIVET OR TODDY CAT
(*Paradoxurus hermaproditus*)

One female of this species born in the Park on 30-4-1975 was living with adult males from the age of about four months. Mating of this female with an adult male was observed for the first time from 23-2-1976 to 28-2-1976 resulting in the birth of a litter of three young on 1-5-1976. The observations suggest that the female became sexually mature at the age of 9 months and 24 days or say 10 months.

The age at which the civets became fully adult is not known (Prater, loc. cit.). Acharjyo and Misra (1975) have given the age of sexual maturity of one male Common Palm Civet as 11 months.

BLACKBUCK OR INDIAN ANTELOPE
(*Antilope cervicapra*)

One blackbuck doe born on 26-2-1975 has given birth to a female young for the first time on 16-4-1977 at the age of 2 years, 1 month and 22 days. This was living with adult males throughout this period. Taking the gestation period as 6 months (Asdell, loc. cit.) the age of sexual maturity of this female can be said as 1 year 7 months and 22 days or say 1 year and 8 months.

The age of sexual maturity of two females of this species is given as 1 year and 7 months and 1 year and 11 months respectively (Acharjyo and Misra 1973). From his observations of two yearling does of this species Schaller (loc. cit.) states that possibly they

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did not bear their first young until two and a half to three years old. According to Taibel (1937) the captive does of this species reach sexual maturity at six months of age and one female had her first young at the age of about fourteen months.

CHITAL OF SPOTTED DEER (*Axis axis*)

One female of this species born here on 20-1-1975 gave birth to a dead male fawn for the first time on 27-2-1977 at the age of 2 years 1 month and 8 days. This was living with an adult male throughout the period of observation. Taking the gestation period as 7 to 7½ months (Asdell, loc. cit.) the age of sexual maturity of this female can be said to be about 1 year and 6 months.

Chital reach maturity at the age of two years (Prater, loc. cit.). Many Chital appear to conceive when they are fourteen to seventeen months old (Schaller, loc. cit.). He further states that a Chital doe with an estimated age of 23 to 24 months carried full-term foetus when killed by a tiger at Corbett Park. One doe in Hawaii was pregnant when killed at an estimated age of eight to ten months (Nichols 1960).

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8. TWELVE YEARS OLD COMMON TEAL (*ANAS CRECCA*)

While analysing the ringing data of the Bird Migration programme of the Bombay Natural History Society during the past twenty years, I came across an interesting longevity record of the Common Teal (C-2871).

The bird whose sex was recorded as a female, was netted and ringed by the Society's field staff on 23rd October, 1966 at Bharatpur, Rajasthan (27°15'N, 77°30'E). It was

later shot by Major Sardar Amanullah Khan of Lahore (30°35'N, 74°20'E) on 1st December, 1978 on the bank of river Ravi about sixteen miles from Lahore (Pakistan).

This recovery is the longest survival record (12 Years, 1 Month and 13 Days) of the species in India, though *The Ring* (Vol. VII No. 76/1973-3) published a record of 13 years and 6 months.

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